

SEQUENCE LISTING

<110> DIVERSA CORPORATION
 BARTON, Nelson R.
 O'DONOGHUE, Eileen
 SHORT, Ryan
 FREY, Gerhard
 WEINER, David
 ROBERTSON, Dan E.
 BRIGGS, Steven
 ZORNER, Paul

<120> CHIMERIC CANNULAE PROTEINS, NUCLEIC ACIDS ENCODING
 THEM AND METHODS FOR MAKING AND USING THEM

<130> 564462006845

<140> Not Yet Assigned

<141> Concurrently Herewith

<150> 60/556,393

<151> 2004-03-24

<150> 60/605,192

<151> 2004-08-27

<160> 12

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 624

<212> DNA

<213> Pyrodictium abyssi

<400> 1

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caggcagtaa	gcgagccaat	agacgtagaa	agccacctcg	gcagcataac	ccccgcagcc	180
ggcgcacagg	gcagtgaaga	cataggttac	gcaatagtgt	ggataaagga	ccaggtcaat	240
gatgtaaaag	tgaaggtgac	cctgcgtaac	gctgagcagc	taaagcccta	cttcaagtac	300
ctacagatac	agataacaag	cggctatgag	acgaacagca	cagctctagg	caacttcagc	360
gagaccaagg	ctgtgataag	cctcgacaac	cccagcgccg	tgatagtact	agacaaggag	420
gatatagcag	tgctctatcc	ggacaagacc	ggttacacaa	acacttcgat	atgggtaccc	480
ggtgaacctg	acaagataat	tgtctacaac	gagacaaagc	cagtagctat	actgaacttc	540
aaggccttct	acgaggctaa	ggagggtatg	ctattcgaca	gcctgccagt	gatattcaac	600
ttccaggtgc	tacaagtagg	ctaa				624

<210> 2

<211> 207

<212> PRT

<213> Pyrodictium abyssi

<400> 2

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Ala	Leu	Ala	Leu	Leu	Ala	Gly	Phe	Ala	Thr	Thr	Gln	Ser	Pro	Leu	Asn
			20				25						30		
Ser	Phe	Tyr	Ala	Thr	Gly	Thr	Ala	Gln	Ala	Val	Ser	Glu	Pro	Ile	Asp
		35				40					45				
Val	Glu	Ser	His	Leu	Gly	Ser	Ile	Thr	Pro	Ala	Ala	Gly	Ala	Gln	Gly
	50				55				60						
Ser	Asp	Asp	Ile	Gly	Tyr	Ala	Ile	Val	Trp	Ile	Lys	Asp	Gln	Val	Asn
65				70				75						80	

Asp Val Lys Leu Lys Val Thr Leu Arg Asn Ala Glu Gln Leu Lys Pro
 85 90 95
 Tyr Phe Lys Tyr Leu Gln Ile Gln Ile Thr Ser Gly Tyr Glu Thr Asn
 100 105 110
 Ser Thr Ala Leu Gly Asn Phe Ser Glu Thr Lys Ala Val Ile Ser Leu
 115 120 125
 Asp Asn Pro Ser Ala Val Ile Val Leu Asp Lys Glu Asp Ile Ala Val
 130 135 140
 Leu Tyr Pro Asp Lys Thr Gly Tyr Thr Asn Thr Ser Ile Trp Val Pro
 145 150 155 160
 Gly Glu Pro Asp Lys Ile Ile Val Tyr Asn Glu Thr Lys Pro Val Ala
 165 170 175
 Ile Leu Asn Phe Lys Ala Phe Tyr Glu Ala Lys Glu Gly Met Leu Phe
 180 185 190
 Asp Ser Leu Pro Val Ile Phe Asn Phe Gln Val Leu Gln Val Gly
 195 200 205

<210> 3
 <211> 513
 <212> DNA
 <213> Pyrodictium abyssi

<400> 3
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 gccgcaacaa gcgagccaat agacgtagag agccacctca gcagcatagc ccctgctgct 180
 ggcgcacagg gcagccagga cataggctac ttcaacgtga ccgccaagga tcaagtgaac 240
 gtgacaaaga taaaggtgac cctggctaac gctgagcagc taaagcccta cttcaagtac 300
 ctacagatag tgctaaagag cgaggtagct gacgagatca aggccgtaat aagcatagac 360
 aagcctagcg ccgtcataat actagacagc caggacttcg acagcaacaa cagagcaaag 420
 ataagcgcca ctgcctacta cgaggctaag gagggcatgc tattcgacag cctaccgcta 480
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<210> 4
 <211> 170
 <212> PRT
 <213> Pyrodictium abyssi

<400> 4
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 Asp Leu Ala Leu Leu Ala Gly Phe Ala Thr Thr Gln Ser Pro Leu Asn
 20 25 30
 Ser Phe Tyr Ala Thr Gly Thr Ala Ala Thr Ser Glu Pro Ile Asp
 35 40 45
 Val Glu Ser His Leu Ser Ser Ile Ala Pro Ala Ala Gly Ala Gln Gly
 50 55 60
 Ser Gln Asp Ile Gly Tyr Phe Asn Val Thr Ala Lys Asp Gln Val Asn
 65 70 75 80
 Val Thr Lys Ile Lys Val Thr Leu Ala Asn Ala Glu Gln Leu Lys Pro
 85 90 95
 Tyr Phe Lys Tyr Leu Gln Ile Val Leu Lys Ser Glu Val Ala Asp Glu
 100 105 110
 Ile Lys Ala Val Ile Ser Ile Asp Lys Pro Ser Ala Val Ile Ile Leu
 115 120 125
 Asp Ser Gln Asp Phe Asp Ser Asn Asn Arg Ala Lys Ile Ser Ala Thr
 130 135 140
 Ala Tyr Tyr Glu Ala Lys Glu Gly Met Leu Phe Asp Ser Leu Pro Leu
 145 150 155 160
 Ile Phe Asn Ile Gln Val Leu Ser Val Ser
 165 170

<210> 5
 <211> 537

<212> DNA

<213> Pyrodictium abyssi

<400> 5

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caagcagtaa	gcgagccaat	agacgtagag	agccacctag	acaacaccat	agcccctgct	180
gccggtgcac	agggctacaa	ggacatgggc	tacattaaga	taactaacca	gtcaaaagtt	240
aatgtaataa	agctgaaggt	gactctcgct	aacgccgagc	agctaaagcc	ctacttcgac	300
tacctacagc	tagtactcac	aagcaacgcc	actggcaccg	acatgggttaa	ggctgtgcta	360
agcctcgaga	agcctagcgc	agtcataata	ctagacaacg	atgactacga	tagcactaac	420
aagatacagc	taaaggtaga	agcctactat	gaggctaagg	agggcatgct	attcgacagc	480
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<210> 6

<211> 178

<212> PRT

<213> Pyrodictium abyssi

<400> 6

Met	Arg	Tyr	Thr	Thr	Leu	Ala	Leu	Ala	Gly	Ile	Val	Ala	Ser	Ala	Ala
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Ala	Leu	Ala	Leu	Leu	Ala	Gly	Phe	Ala	Thr	Thr	Gln	Ser	Pro	Leu	Ser
			20					25					30		
Ser	Phe	Tyr	Ala	Thr	Gly	Thr	Ala	Gln	Ala	Val	Ser	Glu	Pro	Ile	Asp
		35				40					45				
Val	Glu	Ser	His	Leu	Asp	Asn	Thr	Ile	Ala	Pro	Ala	Ala	Gly	Ala	Gln
	50					55				60					
Gly	Tyr	Lys	Asp	Met	Gly	Tyr	Ile	Lys	Ile	Thr	Asn	Gln	Ser	Lys	Val
65					70				75						80
Asn	Val	Ile	Lys	Leu	Lys	Val	Thr	Leu	Ala	Asn	Ala	Glu	Gln	Leu	Lys
			85					90						95	
Pro	Tyr	Phe	Asp	Tyr	Leu	Gln	Leu	Val	Leu	Thr	Ser	Asn	Ala	Thr	Gly
			100					105					110		
Thr	Asp	Met	Val	Lys	Ala	Val	Leu	Ser	Leu	Glu	Lys	Pro	Ser	Ala	Val
		115					120					125			
Ile	Ile	Leu	Asp	Asn	Asp	Asp	Tyr	Asp	Ser	Thr	Asn	Lys	Ile	Gln	Leu
	130					135					140				
Lys	Val	Glu	Ala	Tyr	Tyr	Glu	Ala	Lys	Glu	Gly	Met	Leu	Phe	Asp	Ser
145					150					155					160
Leu	Pro	Val	Ile	Leu	Asn	Phe	Gln	Val	Leu	Ser	Ala	Ala	Cys	Ser	Pro
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Leu	Trp														

<210> 7

<211> 395

<212> DNA

<213> Pyrodictium abyssi

<400> 7

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atatatgctc	acaatgacgt	gaacataaca	aagctaaagg	tcacgcttgc	taacgctgca	180
cagctaagac	catacttcaa	gtacctgata	ataaagctag	taagcctgga	cagcaacggc	240
aacgagtccg	aggaaaaggg	catgataact	ctatggaagc	cttacgccgt	gataatacta	300
gaccatgaag	atttcaacaa	cgacatcgac	aatgacggca	acaatgacgc	caagataagg	360
gttgtagcct	actatgaggc	taaggagggt	atgct			395

<210> 8

<211> 131

<212> PRT

<213> Pyrodictium abyssi

<400> 8

Ser Phe Tyr Ala Thr Gly Thr Ala Gln Ala Val Ser Glu Pro Ile Asp
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 Val Val Ser Ser Leu Gly Thr Leu Asn Thr Ala Ala Gly Ala Gln Gly
 20 25 30
 Lys Gln Thr Leu Gly Asp Ile Thr Ile Tyr Ala His Asn Asp Val Asn
 35 40 45
 Ile Thr Lys Leu Lys Val Thr Leu Ala Asn Ala Ala Gln Leu Arg Pro
 50 55 60
 Tyr Phe Lys Tyr Leu Ile Lys Leu Val Ser Leu Asp Ser Asn Gly
 65 70 75 80
 Asn Glu Ser Glu Glu Lys Gly Met Ile Thr Leu Trp Lys Pro Tyr Ala
 85 90 95
 Val Ile Ile Leu Asp His Glu Asp Phe Asn Asn Asp Ile Asp Asn Asp
 100 105 110
 Gly Asn Asn Asp Ala Lys Ile Arg Val Val Ala Tyr Tyr Glu Ala Lys
 115 120 125
 Glu Gly Met
 130

<210> 9

<211> 372

<212> DNA

<213> Pyrodictium abyssi

<400> 9

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acaatagaga	acaagactga	cgtgaacggt	gtgaagctga	agataaccct	cgccaacgct	180
gagcagctaa	agccctactt	cgactaccta	cagatagtgc	taaagagcgt	tgacagcaac	240
gagatcaagg	ctgtgctaag	cctcgagaag	cccagcgag	tcataatact	ggacaacgag	300
gacttccagg	gcggcgacaa	ccagtgccag	atagacgcca	ccgcctacta	cgaggctaag	360
gagggtatgc	ta					372

<210> 10

<211> 124

<212> PRT

<213> Pyrodictium abyssi

<400> 10

Ser Phe Tyr Ala Thr Gly Thr Ala Glu Ala Thr Ser Glu Pro Ile Asp
 1 5 10 15
 Val Val Ser Asn Leu Asn Thr Ala Ile Ala Pro Ala Ala Gly Ala Gln
 20 25 30
 Gly Ser Val Gly Ile Gly Ser Ile Thr Ile Glu Asn Lys Thr Asp Val
 35 40 45
 Asn Val Val Lys Leu Lys Ile Thr Leu Ala Asn Ala Glu Gln Leu Lys
 50 55 60
 Pro Tyr Phe Asp Tyr Leu Gln Ile Val Leu Lys Ser Val Asp Ser Asn
 65 70 75 80
 Glu Ile Lys Ala Val Leu Ser Leu Glu Lys Pro Ser Ala Val Ile Ile
 85 90 95
 Leu Asp Asn Glu Asp Phe Gln Gly Gly Asp Asn Gln Cys Gln Ile Asp
 100 105 110
 Ala Thr Ala Tyr Tyr Glu Ala Lys Glu Gly Met Leu
 115 120

<210> 11

<211> 448

<212> DNA

<213> Artificial Sequence

<220>

<223> consensus sequence

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<400> 11
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acgtagaaaag ccacctcaca catagcccct gctgCCggcg cacagggcag caggacatag      180
gctacataaa ataacaagat agtgaacgta taaagctgaa ggtgaccctg ctaacgctga      240
gcagctaaag ccctacttca agtacctaca gatagtgcta aaagcgacag caggcacacg      300
agaaggcgtg ataagcctcg agaagcctag cGccgtcata atactagaca acgaggactt      360
cgaagcaca cagaaagaga agcaatagcc tactacgagg ctaaggaggg tatgctattc      420
gacagcctcc tatataactc aggtctgt      448

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<210> 12

<211> 140

<212> PRT

<213> Artificial Sequence

<220>

<223> consensus sequence

<400> 12

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      20              25              30
Thr Gly Thr Ala Gln Ala Val Ser Glu Pro Ile Asp Val Glu Ser His
      35              40              45
Leu Ser Ile Ala Pro Ala Ala Gly Ala Gln Gly Ser Asp Ile Gly Tyr
      50              55              60
Ile Ile Lys Val Asn Val Val Lys Leu Lys Val Thr Leu Ala Asn Ala
      65              70              75              80
Glu Gln Leu Lys Pro Tyr Phe Lys Tyr Leu Gln Ile Val Leu Ser Ser
      85              90              95
Glu Ile Lys Ala Val Ile Ser Leu Asp Lys Pro Ser Ala Val Ile Ile
      100             105             110
Leu Asp Glu Asp Phe Ala Ile Ala Tyr Tyr Glu Ala Lys Glu Gly Met
      115             120             125
Leu Phe Asp Ser Leu Pro Val Ile Asn Gln Val Leu
      130             135             140

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